

Paper reference 31760H

Pearson BTEC

Level 3

Nationals Extended Certificate

Foundation Diploma,

Diploma, Extended Diploma

Total Marks

INFORMATION TECHNOLOGY

**UNIT 1: INFORMATION TECHNOLOGY
SYSTEMS**

Time: 2 hours

In the boxes below, write your name, centre number and learner registration number.

Surname						
Other names						
Centre Number						

Learner Registration Number						

Y71608A



Pearson

YOU MUST HAVE:

Nil.

YOU WILL BE GIVEN:

- **A separate Data Book.**

You do not need any other materials.

INSTRUCTIONS

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this Question Paper or in the Data Book – there may be more space than you need.**

INFORMATION

- **The total mark for this paper is 90.**
- **The marks for EACH question are shown in brackets – use this as a guide as to how much time to spend on each question.**
- **There may be spare copies of some diagrams.**

(continued on the next page)

Turn over

ADVICE

- **Read each question carefully before you start to answer it.**
 - **Try to answer every question.**
 - **Check your answers if you have time at the end.**
-

Question 1 is on the next page.

**ANSWER ALL QUESTIONS.
WRITE YOUR ANSWERS IN THE SPACES
PROVIDED.**

- 1. James is a painter and decorator.
He creates video files to advertise his
business online.**
 - (a) James uses his account to upload
his videos to an online forum.**

(continued on the next page)

Question 1 (a) continued

- (i) James must change his password regularly.

One feature of a strong password is that it must have a minimum of eight characters.

Give TWO OTHER features of a strong password.
(2 marks)

FEATURE 1 _____

Answer space continues on the next page

Turn over

Question 1 (a) (i) continued

FEATURE 2 _____

(continued on the next page)

Question 1 (a) continued

- (ii) Changing his password regularly is one way James can keep his password secure.**

Give TWO OTHER ways that James can keep his password secure.

(2 marks)

WAY 1 _____

Answer space continues on the next page

Question 1 (a) (ii) continued

WAY 2 _____

(continued on the next page)

Question 1 (a) continued

- (iii) Explain ONE way, other than using an online forum, in which James can communicate and interact with online communities. (2 marks)**

(continued on the next page)

Turn over

Question 1 continued

- (b) James stores his files with a cloud storage provider. The cloud storage provider has recently been hacked and data has been breached.**

Explain ONE potential impact to James and ONE potential impact to the cloud storage provider of this data breach.

(4 marks)

James

Answer space continues on the next page

Turn over

Question 1 (b) continued

Cloud storage provider

(continued on the next page)

Question 1 continued

- (c) James is considering different options to store and backup his video files.**

**Explain TWO benefits of using removable storage.
(4 marks)**

BENEFIT 1 _____

Answer space continues on the next page

Turn over

Question 1 (c) continued

BENEFIT 2 _____

(continued on the next page)

Turn over

Question 1 continued

- (d) James downloads and watches videos from the internet to update his knowledge of painting and decorating techniques.**

Describe how James can protect his computer from harmful downloads.

(4 marks)

Answer space continues on the next page

Turn over

Question 1 (d) continued

[illegible]

(continued on the next page)

Turn over

Question 1 continued

- (e) James needs to make sure the videos he uploads are accessible on all platforms.**

Discuss the features of the video file formats he could use to make sure they are accessible on all platforms.

(6 marks)

Answer space continues on the next 2 pages

Turn over

Question 1 (e) continued

[illegible]

(continued on the next page)

Turn over

Question 1 (e) continued

(Total for Question 1 = 24 marks)

- 2. Patricia is the manager of a gaming shop. The shop sells a range of games and gaming consoles.**

Patricia collects and stores details of customers, stock and sales in a computerised stock control database system.

- (a) Look at Figure 1 for Question 2 (a) in the separate Data Book.**

Figure 1 shows an input form Patricia has designed to collect data.

(continued on the next page)

Question 2 (a) continued

- (i) Explain THREE types of validation that could be used on the data before saving the data in the database.
(6 marks)**

TYPE 1 _____

Answer space continues on the next 2 pages

Turn over

Question 2 (a) continued

TYPE 2 _____

(continued on the next page)

Turn over

Question 2 (a) continued

TYPE 3

(continued on the next page)

Question 2 (a) continued

Validation is one method that can be used to ensure the data are accurate before they are stored in the database.

- (ii) Explain ONE other method that could be used.
(2 marks)**

(continued on the next page)

Turn over

Question 2 continued

- (b) Explain TWO benefits of using a computerised stock control system.**
(4 marks)

BENEFIT 1 _____

Answer space continues on the next page

Turn over

Question 2 (b) continued

BENEFIT 2 _____

(continued on the next page)

Question 2 continued

- (c) Patricia produces sales reports each month.**

The reports include:

- **the number of sales by each member of staff**
- **the number of sales for each product.**

Patricia wants to display the results of the data visually, but she is not sure which type of chart is more suitable.

**Discuss the differences between a pie chart and a line chart to display these types of information.
(8 marks)**

Answer space continues on the next 4 pages
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Question 2 (c) continued

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Question 2 (c) continued

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Question 2 (c) continued

[illegible]

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Turn over

Question 2 (c) continued

(Total for Question 2 = 20 marks)

- 3. Molly is an architect who works from home.**

Molly's study has a desktop PC and a printer.

She uses the PC to create designs.

She uses the printer to print hardcopies of the final designs.

Molly uses a smartphone and tablet.

When she visits her clients she uses the tablet to show them the designs.

Molly's children use a laptop, tablet and smartphone.

There is a games room in Molly's house. There are two gaming consoles and a smart TV in the games room.

There is a smart TV in the lounge.

Access to the internet is essential.

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Question 3 continued

- (a) On the blank space provided for Question 3 (a) in the separate Data Book, draw a diagram to show Molly's home network.**

The diagram should include devices and systems that are used, including:

- **desktop PC and printer (study)**
- **laptop**
- **tablet**
- **smartphone**
- **gaming console (games room)**
- **smart TVs (games room and lounge)**
- **connection type(s) used**
- **annotations.**

(6 marks)

(continued on the next page)

Question 3 continued

- (b) Molly emails plans to her clients. Her email provider encrypts the emails.**

Describe how encryption works to enable the plans to be transmitted securely.

(4 marks)

Answer space continues on the next page

Turn over

Question 3 (b) continued

(continued on the next page)

Question 3 continued

- (c) Modern gaming consoles are multifunctional devices.**

Explain the purpose of a multifunctional device.

(2 marks)

(continued on the next page)

Question 3 continued

- (d) Gaming consoles often use wireless controllers.**

Explain TWO benefits of using wireless controllers.

(4 marks)

BENEFIT 1 _____

Answer space continues on the next page

Turn over

Question 3 (d) continued

BENEFIT 2

(continued on the next page)

Turn over

Question 3 continued

- (e) Molly's children play online games, and they also communicate with other online gamers.**

Molly is concerned about the risks involved in online communication.

Discuss the potential risks with online communication.

(8 marks)

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Question 3 (e) continued

[illegible]

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Question 3 (e) continued

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(Total for Question 3 = 24 marks)

4. ESG is an organisation that provides training courses.

(a) The training courses help people with a disability or impairment to use PCs and other digital devices.

Analyse the features and uses of suitable peripheral accessibility devices that could be used in the training courses.

(10 marks)

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Question 4 (a) continued

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Question 4 (a) continued

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Question 4 (a) continued

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Question 4 (a) continued

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Question 4 continued

- (b) The training courses are run from the ground floor of a two – storey building. The first floor has just become vacant.**

At the moment the administration team currently works in a different building.

ESG has decided to move the administration team to the first floor.

A local area network (LAN) will be used to connect the computers.

Cost is one factor that will affect ESG's choice of network.

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Question 4 (b) continued

**Discuss the implications of
installing a new network for ESG
and its employees.
(12 marks)**

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Question 4 (b) continued

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Question 4 (b) continued

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Question 4 (b) continued

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Question 4 (b) continued

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Question 4 (b) continued

(Total for Question 4 = 22 marks)

TOTAL FOR PAPER = 90 MARKS

END OF PAPER
